

source, a grid pattern source, a planar flood field, and a shaped three-dimensional flood field,

measuring the level of radiation emitted from the source that is detected by the detection system, and

calibrating the detection system by evaluating the detected radiation and balancing the system based upon the detected radiation.

58. (Amended) ~~The method of Claim 57 further comprising:~~ A method of calibrating a radiation detection system comprising:

providing a radiation source that emits radiation, wherein the source is chosen from the group consisting of a uniform point-like source, a line-like source, a spherical source, a rod-like source, a collimated spot source, a slit source, a slot source, a grid pattern source, a planar flood field, and a shaped three-dimensional flood field,

measuring an energy-dependent modulation transfer function of the detection system, and

measuring the level of radiation emitted from the source that is detected by the detection system, and

calibrating the detection system by evaluating the detected radiation and balancing the system based upon the detected radiation and the energy-dependent modulation transfer function of the detection system.

~~calibrating the system by accounting for both the detected radiation and the energy-dependent modulation transfer function.~~